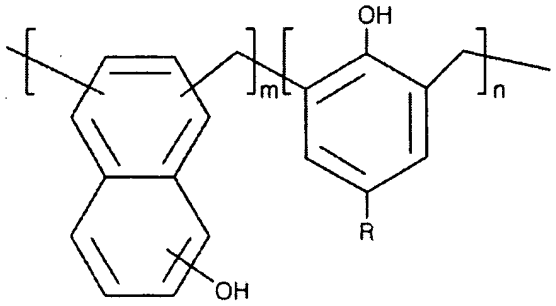
LISTING OF CLAIMS

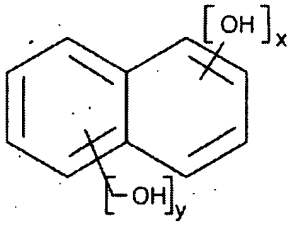
1. (previously presented) A composition for a bottom-layer resist, comprising a polymer represented by the following formula:



wherein R is hydrogen or a methyl group, m/(m+n) is about 0.5 to about 1.0 and n/(m+n) is greater than 0 but less than or equal to 0.5;

a thermal acid generator (TAG) ; and a cross-linker.

2. (previously presented) The composition as claimed in claim 1, wherein the cross-linker is represented by the following formula:



wherein x is an integer in the range of 1 to 3, and y is an integer in the range of 2 to 4.

3. (original) The composition as claimed in claim 2, wherein the cross-linker comprises about 10 to about 40 wt.% based upon the total weight of the polymer.

4. (previously presented) The composition as claimed in claim 1, wherein the TAG is about 1 to about 15 wt. % based on the total weight of the polymer.

5. (presently presented) The composition as claimed in claim 4, wherein the TAG is a compound selected from a group consisting of aromatic sulfonic acid salts.

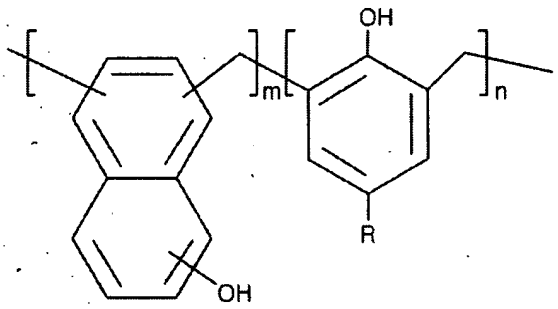
6. (original) The composition as claimed in claim 4, wherein the TAG is ammonium toluene sulfonate.

7. (canceled)

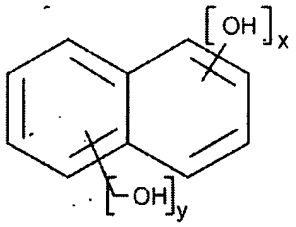
8. (canceled)

9. (previously presented) A patterning method for a semiconductor device comprising:

(a) forming a first resist layer by coating a resist composition on a layer to be etched on a semiconductor substrate, wherein the resist composition is represented by the following formula:



wherein R is hydrogen or a methyl group, m/(m+n) is about 0.5 to about 1.0 and n/(m+n) is 0 to about 0.5, and wherein the resist composition further includes a thermal acid generator (TAG), and a crosslinker agent represented by the following



wherein x is an integer in the range of 1 to 3, and y is an integer in the range of 2 to 4;

(b) baking the first resist layer, thereby forming a bottom resist layer;

(c) forming a second resist layer containing silicon on the bottom resist layer;

(d) pre-baking the second resist layer;

(e) exposing the second resist layer to light;

(f) performing a post-exposure baking (PEB) on the second resist layer;

(g) forming a top layer resist pattern by developing the exposed second resist layer;

(h) forming a bottom resist layer pattern by etching the bottom resist layer using the top layer resist pattern as an etching mask; and

(i) etching the layer to be etched using the bottom resist layer pattern as an etching mask.

10. (original) The patterning method of claim 9, wherein in step (e), ArF or F_2 eximer laser is used for the exposing.

11. (previously presented) The patterning method of claim 9, wherein the TAG is a compound selected from a group consisting of aromatic sulfonic acid salts.

12. (original) The patterning method of claim 9, wherein the TAG is ammonium toluene sulfonate.